

A
ORIGINAL CLAIMS

1. A compound solid tire, comprising a core tire made of an annular elastic body and an annular cover tire having an inner peripheral surface to be fitted to an outer peripheral surface of the core tire, the cover tire forming a tread part and side parts, wherein the inner peripheral length of the cover tire at the inner peripheral surface center position is set to 92 to 99.5% of the outer peripheral length of the core tire at the outer peripheral surface center position.

2. The compound solid tire of claim 1, wherein the expanded width of the inner peripheral surface of the cover tire is set to 95 to 100% of that of the outer peripheral surface of the core tire.

3. The compound solid tire of claim 1, wherein the curvature radius in the tire axial direction of the inner peripheral surface of the cover tire is set to 60 to 75% of the curvature radius in the tire axial direction of the outer peripheral surface of the core tire.

4. The compound solid tire of any of claims 1 to 3, wherein a flange is disposed on the inner peripheral edge of the side part of the cover tire.

5. The compound solid tire of claim 4, wherein, assuming that the section height of an assembly of the core tire and the cover tire is A, the section height of the cover tire B, the tread thickness at the inner peripheral surface center position of the cover tire C, the tread thickness at the shoulder position of the cover tire D and the flange thickness of the cover tire E, it is required that the proportion (%) of these dimensions satisfy the following expressions (1) to (4):

$$35 \leq B/A \times 100 \leq 70 \quad \dots (1)$$

$$5 \leq C/A \times 100 \leq 30 \quad \dots (2)$$

$$100 \leq D/C \times 100 \leq 120 \quad \dots (3)$$

$$30 \leq E/C \times 100 \leq 60 \quad \dots (4)$$

6. The compound solid tire of any of claims 1 to 5, wherein JIS A hardness of rubber compositions which form the cover tire is 60 to 75, and the modulus at 300% elongation is 7 to 14 MPa.

7. The compound solid tire of any of claims 1 to 6 wherein at least one longitudinal groove extending in the tire circumferential direction and a plurality of transversal grooves extending in the tire axial direction are provided on the outer peripheral surface of the core tire and, on the other hand, a protrusion engaging with the longitudinal groove and transversal grooves is provided on the inner peripheral surface of the cover tire.

8. The compound solid tire of claim 7, wherein the transversal grooves are inclined in respect with the tire axial direction and a pattern formed by the longitudinal and transversal grooves is made non-directional.